DEAR CLUBMEMBERS;

As you can see the club is being transferred to new man-
agment for the 1984 year. We are all now in the care of GEORGE
AND SUBAN BAKER of "GEO-SPARTA LTD." Don't worry, we can assure
you that you are in capable hands. George and Susan Baker are
the same people that brought you "Operation Alpha", and "oper-
ation Bravo", so you can expect professional quality in their work.

Some things will change, some will remain the same (see
the 1984 membership application for more details). We don't know
exactly what the MUSIC BOX will be, but we can't wait to
find out.''''''''''

We are not deserting you though folks. We are still on the
staff on an "on call basis". We are still available for programming
and technical support, plus any other help that seems necessary.
(we are still in the orchestra, but we'll be playing second fiddle
from now on)...............

¡¡¡
¡¡¡

So far we haven't had too much response to our first IM-I
IN A MILLION survey that we put in the August issue. We know
that it may be a bother to some people, but we do need to hear
from you THE MEMBERS to know what you want.

All responses are being relayed to George and Susan
Baker so that you can have a say in the club for next year too...
KEEP THEM CARDS AND LETTERS
COMMING FOLKS

¡¡¡
¡¡¡

Many of you members have tried to purchase the GALORE PACKAGE
from our last sale, only to find that we were sold out of BUILDING
BLOCKS and PI-108's. I promised that I'd keep you posted in
the newsletter. SO WHAT HAPPENED??????????????????????????

We have tried several places here in the midwest but so far have
not found anyone that could produce either at a REASONABLE price.
We've finally located a place for the primary chips, and a place
to supply the boards, but the end product would be a little out of
the IM-I owners reach. However, all is not lost. WE MAY BE ABLE
TO NEGOTIATE WITH AN OUTFIT OUT OF OUR GENERAL AREA IF THE DEMAND
IS HIGH ENOUGH.

People, all I can say over that is we are still working on it. If
you are still interested in expanding your machine, let us hear
from you. The BUILDING BLOCKS and PI-108's will be troublesome
to produce at best, and nobody we've found wants to make less than
25 minimum.

¡¡¡
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::

Hey folks, I made a BD 3D. I keep forgetting that everybody out
there does not play with the Machine Language programming as much
as I do and they have a hard time understanding it. Well the
Towers of Hanoi that was in the June issue required some Machine
Code work and a lot of people got confused so here is the changes
required to make the program build the Machine Code for you.
Change the following listing:

```
2 FOR I=41994 TO 41999; READ I; POKE I,I; NEXT I
3 DATA 198,255,189,119,8,57
4 'TOWERS OF HANOI (V3.1)
```

Some of you programmers out there that send in programs with
Machine Code might use this as an example and try to set them up
like this ahead of time.

::

Here is something from RICK THUES

Rick has sent in a good example of how to use String Concatenation
on the IM-1. First let me try to define String Concatenation.
This is the ability to combine 2 strings into 1 string for printing
or just for convenience.

Most BASICs allow this:

By the way this is one of the things added by LEVEL I.

```
10 A$="ABCD"
20 B$="EFGH"
30 C$=A$+B$:REM THIS IS NOT THE NORMAL MATH +.
40 PRINT C$
Line 40 would pring ABCDEFGH.
```

With the IM-1

```
10 DIM A$(6), B$(6), C$(12): REM ALWAYS DIMENSION STRINGS
20 A$="ABCD"
30 B$="EFGH"
40 C$(0)=A$: REM STORE A$ IN C$ STARTING AT POSITION 0
50 C$(LEN(A$)+1)=B$: REM STORE B$ IN C$ STARTING AT POSITION
55 REM                LENGTH OF A$ PLUS ONE
60 PRIN C$: REM C$ NOW CONTAINS ABCDEFGH
```

::

For those out there needing
letter writing ability.

We have had several letters and calls about this and the best thing
around right now is the COPY WRITER that we use for the news
letter now. Check the WHAT ADS for info on where to order.

::

From Bill Bowman

When either editing or adding a new line or deleting a line in an
existing program already containing data (Editor: I am assuming

that the data referred to is in Arrays set up by DIM statements)
The computer variable values are upset to provide some weird values
when programs are executed. Is there any way around this?
I've been doing it the hard way- make a note of the variables &
their data contents before making any changes- then make the change
type RUN to clear & then put back the correct data one by one
using the immediate mode- ie: B(4)=20.70 B(5)=199.30

First off a little explanation about the ARRAYS (DIM). The
IM=1 in normal operations starts the ARRAYS (DIM) immediately
following the normal program code, so if any changes are made in
the program this changes the starting point for the ARRAY (DIM).
If a RUN is used after changes this resets all pointers and
clears all variables storage areas, if a GOTO is used the
pointers set earlier will now be invalid and possible the area
that did contain variable data now contains program information.

There are only 3 things that can be done to prevent this.
1. Store data on disc.
2. Store data on tape using the program published in an earlier
   issue. Care has to be taken that the data is read back into
   the same ARRAYS(DIM) as they were written from.
3. Set aside a portion of memory for ARRAY storage that will
   not be used by the program. This can be done using the
   lower part of memory used for HI-RES or by setting aside
   some of the high part of memory space.

Here are 2 lines of code that can be used to set up the #3.
100 POKE 41809,2H0:POKE 41810,0: DIM A9(20,30), B4(5,10)
105 POKE 41809,PEEK(41984): POKE 41810,PEEK(41985)

Line #100 will first reset DIM pointer to D000 and then
Dimensions the Arrays. Line #105 will reset the DIM pointers
to the end of the program in memory. As long as you don't use a
RUN the data in the ARRAYS should not be cleared. Here are a
list of things that you need to watch out for.
1. Program size does not overlap into the area you set aside for
   the ARRAY.
2. That you set aside enough memory to be used in your variables.
3. Don't use a RUN.
4. Use a GOTO command to restart the program, do not reExecute
   DIM's.

I am sure that I have probably left something out so if some of
you Super programmers out there find it let me know.

****

For DISC users out there.

I have published this before but I believe that it needs to be
put out again. If you are not using your DISC drive either turn
off the unit or use the POKE 26112,0 to turn off the motor. These
motors seem to overheat if left on too long.

From Larry Rowley

I have a IM-1 computer and wold like to have a printer. I have recently purchased the interface(RS-232) for the expansion block. In Popular Computing I have seen an ad for a new printer by Leading Edge. He ad says it will work on a parallel and serial interfaces, and with most popular computers. Will a special interface cable be needed or is it a standard cable produced? Almost any printer which has a RS-232 interface will work and the cable to connect most of them is not too hard to make. So far we have hooked up at least four different types Epson, Star, Radio Shack and Okidata with no problems. On some of them a standard cable will work.

Some General Questions

1. Is it possible to connect a monitor to the IM-1?

Right now I don't have a set of plans to do this but if somebody out there has any please let us know and we will pass it along.

2. How can I increase keyboard debounce to stop double keying?

This we understand the keys the only thing I know of that will help is to spray the keys with a good CONTACT/TUNER Cleaner. Radio Shack sells some.

3. On Fig 3-1 Memory Map what is the ROM expansion used for?

This was intended for future expansion by APF but it never came about. With hardware changes this could be used for some special ROM programs.

4. Is it possible to use the memory locations from E000 to FFEF (57344 to 65519) for extra RAM?

Yes, with hardware changes. There were some kits available from some of the members last year to do this but we have not heard from any of them this year offering them. If they will contact us we will pass it along.

*****HERE'S ANOTHER LETTER FROM RICK THUES*****

Enclosed find *animal* on cassette tape. Also, find a hard listing of same.

Animal can be used with 8K RAM. Simply change the dimension of AN$ from AN$(200,50) to AN$(100,50) on line 100. I did not include a list feature, but this can an done easily by searching through AN$ and printing all strings which begin with "A?". If the user has a disc drive the program can be modified to store the variable M as a string or AN$(0,1) then have An$ to disc. AN$ can then be read as data and the program will rereader what it has learned.

Of course, the more you add to the program the smaller the dimension of AN$ must be.

Animalcam has been modified to deal with other categories by changing the data statement and various dialogue references from animals to any other class of object. The program can distinguish between types of rocks, emotions, biological classes etc. IMAGINE THAT!

Will you publish some disc routines? Especially, how to turn the drive motor on and off with software. I think Jim Clatfelter and Glenn Jones use a machine routine in copy writer for this purpose. Also, I am having trouble changing programs on the disc. If I use a program like the example on page 7 of the FI-100 documentation program data becomes jumbled. For example, I can run "PROGRAM1" from the disc, then type RUN and PROGRAM1 will run fine. If, however, RUN"PROGRAM" is part of a menu program on the same disc then "PROGRAM"'s listing becomes filled with garbage.

That's all for today. I hope the members enjoy *ANIMAL*.

Easy answer first: As stated earlier to turn off motor use the POKE 26112,0 and to turn on the motor use POKE26112,4.

Next answer::   To chain programs like you want you will have to put the following line of code as the first line of the program being loaded in.
1 POKE 41809, PEEK(41934): POKE41810, PEEK(41935)
This will reset the DIM pointers. Hope this cures ALL...
##

From Harry J.

Is it possible to use a pixel pen on the IM-1?

It is possible but it would require a program and some hardware modifications first. There are several different types of these pen's around and some would be pretty simple to adapt to the unit.

##

From Russ Needham

I am having difficulty with my MPA-10. I believe the problem is in the AC power supply (model T-213A). It doesn't make the normal "humming" sound when it's plugged in and the power light on the MPA-10 doesn't light up when the computer is turned on.

It sounds like you might have a bad power supply like you suspect and it could be as simple as a broken wire in the plug that plugs into the MPA-10. If you have a multimeter you can check it or have somebody else check it. Otherwise we do repair the machines here at what we think is a reasonable charge.

##

※※
Help from the far north and good LOUIS BOLDUC

Louis sends in some help for Albert Kremer's disc problem.

For all of the folks with READ ERROR problems, here's how to
troubleshoot your disk.
1. Go in the MONITOR mode (call 28675).
2. Keyin M 81A0 and enter the following:
      D0 68 8F 86 20 C6 01 30 6A 6A 7E 70 80
3. Type 0 81A0 a few times, if you hear the stepping motor in the
drive going up and down smoothly, then the head is probably dirty
and it's just a matter or cleaning it to fix the READ ERROR
problem unless you have a bad SECTOR on your diskette, in which
case there is no way to recover. (Great news at this point, if
the problem is a bad sector on the DISC then you can probably
use the new DISC programs For Sale in this issue to correct it)
4. If you hear the stepping motor doing strange things, live
really going crazy or if it doesn't move at all, then here's what
to do. (This should only be done by a qualified person).......
Open your disk and locate IC number 4E (7542A, it's a dual
peripheral driver NAND). Replace it with a new one or find
somebody to replace it for you if you're not used to doing IC
soldering.

All of the above steps only apply to drives built by APF and if
the above steps do not fix the problem it is recommended that you
take the drive to a qualified repair center.
※※※
From one of the new members CINDY BREWER

1. Is there a command to erase a tape after you have SAVED
programs on it?

The only way to erase a tape is to use a bulk tape eraser or to
run it through a normal tape recorder in record mode with out the
microphone hooked up.

2. The programs that are printed in the Newsletter, do I use
them with the Basic Cartridge only?

Yes, these have to be keyed in, loaded and Run with the cartridge
in.
3. Do we order games from you or the people that advertize them?

Please order directly from the advertizers....

※※※
    ounds like you might have a bad power supply like you suspect

```
1Ø  REM    ***ANIMAL
2Ø  REM    ***DEVELOPED BY ARTHUR LUEHRMANN
3Ø  REM    ***SHORTENED AND MODIFIED BY
35  REM    ***NATHAN TEICHHOLTZ (DEC) AND
37  REM    ***STEVE NORTH (CREATIVE COMPUTING)
4Ø  CALL 17Ø46: REM    ***CLR SCREEN
5Ø  REM    ***MAIN QUESTION SECTION
9Ø  REM    ***DIM ALL STRINGS
1ØØ  DIM AN$(5Ø,Ø),I#(1,Ø),C$(1),B$(1),C$(1),N$(1Ø),D$(2Ø),B$(4Ø)
19Ø  REM    ***READ INITIAL DATA
2ØØ  FOR I=Ø TO 3: READ AN$(1,1): NEXT I
25Ø  N=AS: AN$(Ø,1)=4Ø
5ØØ  INPUT A$
5Ø5  REM    ***MAIN QUESTION SECTION
5ØØ  IF A$="Y" THEN 5ØØ
5ØØ  IF A$="N" THEN 5ØØØ
5Ø5  IF A$="SAV" THEN GOTO1Ø TO START.
57Ø  IF A$(Ø)<>"Y" THEN 5ØØ
58Ø  K=1
6ØØ  GOSUB 1ØØØ
1ØØØ  REM    ***QUESTION PROCESSING SECTION
1Ø2Ø  B$=AN$(K,1)
11ØØ  PRINT "IS IT A ";
111Ø  GOSUB 4ØØØ
12ØØ  INPUT A$
14Ø  IF A$="Y" THEN  PRINT "WHY NOT TRY ANOTHER ANIMAL?": GOTO 5ØØ
115Ø  N$=$(C$)
12ØØ  INPUT "THE ANIMAL YOU WERE THINKING OF WAS A ",N$
117Ø  IF A$="Y" THEN  PRINT: PRINT "PLEASE TYPE A QUESTION THAT    WOULD DISTINGUISH A"
12ØØ  PRINT N$;" FROM A ";: GOSUB 4ØØØ
121Ø  PRINT
123Ø  PRINT "NO MORE THAN 7Ø CHARACTERS"
122Ø  INPUT D$
124Ø  PRINT
1255  PRINT "FOR A ";N$;" THE ANSWER WOULD BE";
126Ø  INPUT C$
127Ø  IF C$(Ø)<>"Y" IF C$(Ø)<>"N" THEN 126Ø
129Ø  IF C$(Ø)="Y" THEN B$="Y"
14ØØ  IF C$(Ø)="N" THEN B$="N"
135Ø  REM    ***STORE LAST QUESTION
136Ø  N=N+2
138Ø  AN$(N1,1)=Ø#
14ØØ  AN$(N,1)=$\A',ANS(N1,3)=N$
14Ø5  REM    ***STORE NEW ANIMAL
141Ø  AN$(N+1,1)=\A',ANS(N1,3)=N$
142Ø  REM    ***CONVERT INTEGER REFERENCES TO STRINGS (STR$ FUNCTION)
144Ø  A=N;B=D/10
146Ø  FOR I=Ø TO 1
15ØØ  A= INT ((N1(1)/1ØØ)
152Ø  B(T,1)= C$ (A+5Ø)
```

```
1550 B= INT (((HL)1-(AH140)/1/8)
1570 T$(I,1)= CHR$ (B+48)
1580 D= INT (HL1-(AH140+B*10))
1590 T$(I,0)= CHR$ (C+48)
1600 NEXT I
1660 REM    ***NEW QUESTION
1662 REM    ***CONCATENATE AN$(K,1)
1670 AN$(K,1)=B$
1700 AN$(K,1)="\0"+AN$(F,3)+B$
1710 GOSUB 4200
1715 AN$(K, LEN (AN$(K,1))+1)=B$(0)
1720 X=1
1740 GOSUB 4200
1760 AN$(K, LEN (AN$(K,1))+1)=B$(0)
1775 AN$(K, LEN (AN$(K,1))+1)=B$(0)
1800 X=A: GOSUB 4200
1855 GOSUB 4200
3000 GOTO 500
3004 REM    ***SUBROUTINE TO PRINT QUESTIONS
3006 INPUT A$
3007 IF A$(0)="Y" IF A$(2)="N" THEN 3040
3100 C$="\01"+B$(B)
3120 REM    ***LOCATE YES/NO REFERENCE NUMBER
3140 FOR X=0 TO LEN (AN$(F,1))-1
3160 IF B$<C# THEN 3700
3180 IF B$=C# THEN 3700
3195 PRINT 3195: STOP
3196 NEXT X
3200 REM    ***CONVERT STRING REFERENCE TO INTEGER (VAL% FUNCTION)
3720 A=VAL(A$,X+1)
3730 A= ASC (A$(0)-48)*100
3735 B=( ASC (A$(1)-48)*10
3740 C= ASC (A$(2))-48
3745 K=A+B+C
3800 RETURN
3990 REM    ***PRINT AN$(F,1) SUBROUTINE
4020 FOR I=0 TO  LEN (AN$(F,1))
4044 IF A$(X)= "\N" THEN  PRINT B$(0):NEXT I
4060 RETURN
4190 REM    ***ROUTINES TO STORE YES/NO REFERENCES
4245 AN$(K, LEN (AN$(K,1))+1)=B$(X): RETURN
4700 AN$(K, LEN (AN$(K,1))+1)="\N": RETURN
4990 REM    ***FUTURE LIST OF ANIMALS
5000 PRINT "NO LIST YET": GOTO 500
5060 REM    ***BREAK THEN GOTO 5060 PRINTS AN$
5080 INPUT "STORE HOW MANY ELEMENTS OF ARRAY";K
5010 FOR I=0 TO K:  PRINT AN$(I,1): NEXT
9020 STOP
9090 DATA 4,\0"DOES IT SWIM\Y\N82\N08%,\AFISH,\ABIRD
9100 PRINT "HERE IS A GAME WHICH WILL GROW  WITH YOU AND BE A LOT OF FUN TO PLA
     Y. ALWAYS MOVE YOUR QUESTIONS"
9110 PRINT "OR A TYPE QUESTIONS. ALSO BE  SURE AND SAV(SAVE) AT THE END OF
     PLAY TO KEEP  THE ANIMALS."
9120 PRINT : PRINT : RETURN
```

(Only four answers so far. Keep them cards and letters coming.)
Q. 1 How important is your machine?...Average answer is "8".
Q. 2 More ads?...yes "2", no "2". A footnote from one member:
"I believe ads should be held at 15 to 65% ratio of bulletin."
EDITORS RESPONSE The ads you find in the newsletter are added
to it after printing, and are not actually part of it. We ponaced
a minimum of 18 pages a month and have so far not gone under that
amount. The full page ads are seperate.
Q. 3 Preferable programs?...home "4", business "2", games "0".
EDITORS RESPONSE. I don't know if members just don't want them,
or if we supply too many in the program section. Let's hear from you.
Question # 5 is omitted to save space for comments.
Q. 6 Want any changes in the newsletter?....EVERYBODY HAD
SOMETHING TO SAY ON THAT ONE.

"Leave a larger margin on the left side of the sheet so it could
be punched out and put into a folder for future reference."

"Better documentation of APF & printed programs. More news
about APF. Newsletter should be copyedited."

"Think in CR. How about some business programs, lodger
and a good program. How about an inventory program along the same
lines.---Here is a good tip!" (Editor here: a good tip followed
but it needs to be checked out here personaly to avoid any
possibility of damage to machines. We test just about everything!)

"None--- I think it serves my purposes just fine but it's difficult
to please everyone. Besides keeping track of all home management
info & data on our retirement investment--I spend an hour or so
each day trying to learn at the hard way--Trial and Error."

EDITORS RESPONSES:...We already do have as much margin as
possible without sacrificing valuable space and infomation. The
club programs have to be printed in this large print to be readable,
the small print got us quite a few complaints. We are doing our best.
               We cram in as much as we can. The newsletter
is done on a rush basis, to get it out on time (or almost), so
we copyedit just before it goes to the printer. He takes 2 days.
               Business programs have neglected a little.
You can expect to see more in the next coming months.
Q. 7 Left the name?....Friendly attitude. "lonely members".
Q. 8 Use the (im-1) for...home "4", bus "1", games "1". (you say
check more than one answer if you need to (dive)
               COMMENTSCOMMENTSCOMMENTS

"Simpler programs are best(like the one submitted) Editor again:
A small program was enclosed with the survey, but we need to check
with the individual to make sure we can publish it.
"Number 1 is a loaded question. As a hobby and learning tool it
is all important. As a business machine it is limited by lack of
programs and capacity, so let's say a 7.5. (Refering to the IM-1
REMEMBER, YOU DON'T NEED TO SIGN YOUR SURVEY FORM IN ORDER TO
GIVE YOUR OPINION.

You knew it was coming didn't you!!!! Introducing the IM-1 in a
MILLION T-shirt. You've always known you were one in a
million, so here's your chance to tell everybody else.

Imagine yourself wearing your golden HAMED shirt with your
clubs logo on the back in large OLDE ENGLISH SCRIPT

Available in small medium and large with black letters on a gold
cloth....$9.95 plus $2.00 shipping/handling   order from the club.

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Here is the latest status and price list of the various APF
material........Building Blocks...Sold out for now. See sage one.
...............FI-180's.........Sold out for now. See page one.
...............SI-232's..............That we got. $69.90 plus
$5.00 SH/HB. Free with purchase of printer.
...............APF diagnostic.......Got that too. $5.95 plus
$2.00 SH/HB
...............Disc test program....In stock....$7.95 plus
$1.00 SH/HB
...............Modified SI-232 with software to run a modem
and printer at the same time are in stock and cost $29.95 plus
$5.00 SH/HB. If you already have the DALDOS PACKAGE, you
may choose this instead of the standard SI-232 with purchase of
printer.
...............Original assembly listings....Over 50 pages
$19.95 plus $3.00 SH/HB.
...............All disc programs on one disc...This is EDITOR,
DRDUP, KEYBASSEMBLER , FREE WITH PURCHASE OF DISC DRIVE. $29.95
plus $3.00 SH/HB.

We still think the GEMINI series (IP-X and IS-X) is the best
for the clubmembers money!!! The IP-X is currently $275.00 plus
$5.00 SH/HB This includes a virtually complete set up and check
out of the machine before it leaves this office, cables, and your
choice of SI's
Disc drives come set up as well with cable, & internal power supply.

ALL ITEMS HAVE OUR 90 DAY WARRANTE
WRITE FOR A BROCHURE ON THEE GEMINI IP-X OR IS-X
》》》

PROGRAMS IN REVIEW
HEX-MART....Here is a set of programs that can be very
useful to the machine code programmer and the Disc Drive user.
They will be great addition to your UTILITY library. We've
used it in this office several times already!
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Eric Beckett is here again with an even larger lineup of programs.
Like "PRODUSE ON THE FREEWAY" has been one of the best so far
and his new "MS. PAC-MAN" looks like another winner.
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DISK MOD / INIT40 : A two program set. For all serious disk users.

$12.95 on cassette — both load in 8K, transferable to disk.

DISK MOD : Numerous features allow the user to read any track and sector from an APF disk, display it on the screen, place it in RAM, modify it, or write it back to disk. Automatic stopping allows work on contiguous or separate sectors. READ/EXAMINE/MODIFY/WRITE. You can even read disks from other popular computers including Radio Shack and TI.
INIT40 - Tired of 34 tracks of 8 sectors? How about 40 tracks of 10 sectors? Yes, you can now INITialize your diskettes beyond APF. These INITialized disks are still compatible with APF's DOS. However when used with DISK MOD, you get an additional 32K of storage. These two programs are a must for any serious disk owner.

****

SPOTLIGHT on SOFTWARE : A closer look at HEXMART's SUPER BASNUM

SUPER BASNUM is a line renumbering program which incorporates the features found in numerous larger computer systems. Below is a review of these features!

#1. TOTAL USER FLEXIBILITY
    You specify the conditions... Renumber the whole program with any beginning line number and increment or renumber a portion of the program starting at any line number.
#2. REFERENCED LINE POINTERS AUTOMATICALLY UPDATED
    "BASNUM" has been designed to accommodate all of APF BASIC's referenced line "calls". GOTO (ON), GOSUB (ON), IF-THEN, and PRINT USING (when referenced to line #). All line number references will be changed.
#3. OCCUPIES NO USER RAM
    Since "BASNUM" exists in an area of memory not normally used by BASIC, most any program that will boot into memory can be renumbered. Works in 8 or 16K IM-1's and 2FK IM-2's.
#4. REM STATEMENTS IGNORED
    All code following a REM statement is ignored. As a result, Assembly (machine) language subroutines written under a REM are unaffected by "BASNUM".
#5. UNIQUE ERROR CHECKING
    "BASNUM" has been given four (4) error handling routines. If it finds any of these errors, it will abort renumbering and display an error message. These unique checks guard against user and program generated problems.
#6. USER FRIENDLY
    "BASNUM" is a menu driven. Combined with easy to understand "prompts", error checking, and mistake recovery, even the first-time user should have no trouble.

****

All programs are supplied on quality cassette tape and are transferable to diskette.
All will load and run in an 8K computer. Documentation outlines conversion to 16K.
Prices include all shipping and handling. Each program is sold with a 60 day replacement guarantee - if it fails, return the original copy to HEXMART for a free replacement.

ORDER FORM: Send NAME, ADDRESS, and MONEY ORDER to:

_____ SUPER BASNUM $14.95 ea.   HEXMART SOFTWARE
_____ SUPER SORT $14.95 ea.   1048 Alpine N.W.
_____ TAPE ASSEMBLER $14.95 ea.   Grand Rapids, Mi 49504
_____ DISK MOD $12.95 ea.
_____ DISK MOD / INIT40 $12.95 ea.

hexmart Software

1048 Alpine N.W., Grand Rapids, Mi. 49504

Hexmart is a newly formed software vendor dedicated to providing the APF computer owner with a new and unique collection of programming. We feel the APF computer is a well built and powerful system which lacks only the software to unlock it's true potential. After a review of this initial collection, we believe you will agree that this is the beginning of what we feel is a powerful group of UTILITY software. HEXMART is not a game company, we prefer to think of ourselves as a company which provides the "tools" to assist you, the user, with your program needs.

SOFTWARE

SUPER BASNUM : The BASIC line renumbering program.
    $14.95 on cassette - loads in 8K, runs using no program RAM
Have you ever programmed yourself into a corner? You need a ten line subroutine but have space for only five lines. Don't worry, BASNUM is here! Renumber your entire program from the beginning OR renumber starting from ANY line. You specify the starting point, load your program and CALL BASNUM. It does the rest, including changes to all line references. It's loaded with error checking which makes it easy to use.

SUPER SORT : A machine language sorting routine.
    $14.95 on cassette - loads in 8K, requires less then 1/2 K
If you have ever tried to sort a lengthy list of strings in BASIC, then you know how slow APF can be. No more! SUPER SORT is a machine language sorting routine which can be included in your programs to speed string sorts by over 100 times. A few simple POKEs followed by a CALL is all that's needed. You can include SUPER SORT in your existing programs (it is supplied with an APPEND routine allowing your program to be loaded "behind" the machine code), or you can write a new program behind SUPER SORT. A truly powerful routine.

TAPE ASSEMBLER : A cassette based assembler for APF's Motorola 6800.
    $14.95 on cassette - loads in 8K, expandable to 16K
No, you don't need a disk system to write Assembly Language programs. Hexmart's TAPE ASSEMBLER allows you to write those programs using 6800 code. Buy now and recieve the following: 1) two programs - screen only and line printer versions, 2) instructions - including how to use and incorporate Assembly code in the APF, 3) 6800 Assembly Language work sheets, and 4) a brief introduction to Assembly Language programming. Learn to make the APF fly!
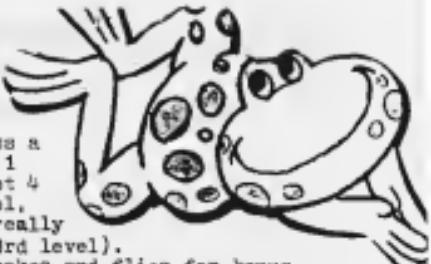
DISK DIR : A master disk directory filing system.
    $12.95 on cassette - loads in 8K, transferable to diskette.
You say you have a house full of diskettes and your not sure which one contains that needed program? DISK DIR to the rescue! Creates a master file of up to 200 titles from the directories of all your diskettes. You name each disk with any three-character code and DISK DIR automatically reads all program names on the disk, sorts them into alphabetical order, and stores them in the master file. Editing allows the master file to be updated as your collection of programs change.

-FROGGY ON THE FREEWAY-

If you like highspeed thrills and excitement, you'll love FROGGY ON THE FREEWAY! A colorful, HI-RES, quick action game. You control a frog across a 10 lane freeway each time you get 1 frog home the traffic gets faster. Get 4 home and advance to the Gold frog level, this ones really tough! And if your really good you'll make it to the RED FROG (3rd level). This levels a killer. Frog may eat snakes and flies for bonus points. It's all a minute action will provide hours of challenging fun and excitement for kids of all ages!!! $7.50 plus shipping

ZAK-MAN

Just like the arcade version, you control the little guy, eat all the dots, while 4 very quick ghosts try to eat YOU. Each screen gets faster and faster..... 95% machine language quick action, HI-RES graphics, and great sounds. Will provide hours of fun. $7.50 plus shipping

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Can you Escape? Your 8 floors below the earth. In a maze with NO exits! If you destroy the 4 security banks a door will open in which you escape to the next level. However you must do this while running from the roving guards. They chase and fire bullets at you so you must fire back and destroy them. 8 mazes keep you constantly challenged. 99¢ machine language gives you quick, HI-RES, color graphics and many sounds will keep you entertained on those boring evenings in front of the TUBE!

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Get any brand new APF PROGRAM of your choice FREE!!!

Buy anyone of my games and you get a new APF program of your choice; still in the wrappers and gaurenteed new; FREE!!!!!!!!! I have all games on the list below but please list 1 alternate games in case your first choice is sold out here. To get your free program just order any one of my games; PAK-MAN, FROGGY OR TNX PREDDAY, ESCAPE, MS. PAK-MAN and coming soon 16K Escape II & 16K Super Froggy. These are excellent quality hi-res arcade games loved by hundreds of APF owners.

HERE ARE SOME COMMENTS FROM HAPPY CLUB MEMBERS:

"Thank you for your games. Has been great fun for my kids"
                                                    G. Kortman Croth, CT.

"Please do more games (excellent)"
                                                    P. Burrows Jerseyville, IL

"Kids love it, excellent, what else do you have?"
                                                    J. Raccio Wallingford, IL

"...best game since Space Destroyers ...excellent game"
                                                    G. Beihold Hoagland, IN

"My family and I enjoy your PAK-Man & Froggy very much, let us know if
you write more games"
                                                    L. Shouse Halfway, MO

"Good games, hard to beat,..."
                                                    J. Crescovich St. Louis, MO

"Very fun & fast action game. Difficult, keep up the good work!"
                                                    L. Rowley Temple Hills, MD

I WOULD LIKE TO THANK THE HUNDREDS WHO WROTE AND SAY THEIR SUPPORT!

APF Programs Available:

Electronic Files	Math Tutor	Hangman
Bar Charts	The Word Factory	Shooting Gallery
Typing Tutor	Spelling Duel	Casino
Check Book Manager	Jumbled up Things	Black Jack
Budget Manager	Perception	Baseball
Personal Business Machine	Music Composer	Boxing
Billboard	Space Destroyers	Backgammon
Space Size and Surface Guide		Catena

ALL APF PROGRAMS ORDERED WITHOUT 1 OF MINE $4.00 each plus shipping

MY NEWEST GAME

If you liked Pak-Man, you'll love MS. PAK-MAN. I didn't just put lipstick and a red ribbon on Pak-Man; I added 9 completely different screens. That's Right! Eat all the dots and you go to the next challenge maze. But there's more! Make it thru the first 10 screens and you start over with only 2 power pills per screen! Make it thru those 10 and start over with NO power pills! Make it to screen 30 and you'll get a valuable message!! A REAL CHALLENGE!!!! $7.50 plus shipping